

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a supporting substrate made of insulating material;

5 a conductive pattern²⁴ provided on a surface of the supporting substrate;

an external connecting terminal²⁴ provided on a back surface of the supporting substrate and electrically connected to the conductive patterns;

10 a circuit element^{29 + 30} provided on the conductive pattern;

and

a glass plate²⁴ that covers the circuit element and that forms a hollow airtight portion between the supporting substrate and the glass plate.

15 2. A semiconductor device according to claim 1, wherein the glass plate includes a transparent glass plate.

20 3. A semiconductor device according to claim 1, wherein the supporting substrate includes a flat supporting portion and a column portion, and the conductive patterns are provided on the flat supporting portion.

25 4. A semiconductor device according to claim 1, wherein the glass plate is adhered onto the column portion.

5. A semiconductor device according to claim 1,
wherein a via hole is provided in the supporting substrate, and
the circuit element and the external connecting terminals are
5 electrically connected through the via hole.

6. A semiconductor device according to claim 1,
wherein the circuit element is formed of one of a semiconductor
element and a fuse element.²⁹³⁰

7. A semiconductor device according to claim 6,
wherein the fuse element is formed of a bonding wire.

8. A semiconductor device manufacturing method
15 comprising steps of:

preparing a supporting substrate in which conductive
patterns having a number of mounting portions thereon are
provided on a surface of the supporting substrate and external
connecting terminals are provided on a back surface of the
20 supporting substrate;

fixing a circuit element onto respective mounting
portions;

adhering a glass plate to cover the circuit element and
to form a hollow airtight portion between the supporting
25 substrate and the glass plate every mounting portion; and

dividing the supporting substrate into respective mounting portions by dicing adhered portions between the supporting substrate and the glass plate.

5 9. A semiconductor device manufacturing method according to claim 8, wherein a visual inspection of the adhered portions is carried out after the supporting substrate and the glass plate are adhered.

10 10. A semiconductor device manufacturing method comprising steps of:

15 preparing a supporting substrate in which conductive patterns having a number of mounting portions thereon are provided on a surface of the supporting substrate and external connecting terminals are provided on a back surface of the supporting substrate;

 fixing a circuit element onto respective mounting portions;

20 mounting a lattice-like column member on the supporting substrate;

 adhering a glass plate onto the column member to cover the circuit element and to form a hollow airtight portion formed by the supporting substrate, the column member and the glass plate every mounting portion; and

25 dividing the supporting substrate into respective

mounting portions by dicing adhered portions between the supporting substrate and the glass plate.

11. A semiconductor device manufacturing method
5 according to claim 10, wherein a visual inspection of the adhered portions is carried out after the supporting substrate and the glass plate are adhered.

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